

a bias generation circuit for outputting an average value of the wobble envelope voltage as a bias voltage;

an arithmetic unit for calculating a positive square root of the wobble envelope voltage with respect to the bias voltage assumed as being "1", and outputting a reciprocal of the calculated positive square root as a calculation result; and

recording power control means for controlling recording power when the optical means records the information in the optical disk, based on the calculation result.

30² (New) An optical disk apparatus according to claim ~~1~~², wherein:
the optical disk apparatus is capable of recording data in a guiding groove portion and an inter-guiding groove portion of the optical disk;

the optical disk apparatus further comprises identification means for identifying whether a track scanned by the optical means is in the guiding groove portion or the inter-guiding groove portion; and

the bias generation circuit generates two types of bias voltages, a bias voltage for recording in the guiding groove portion and a bias voltage for recording in the inter-guiding groove portion, based on an identification result by the identification means.

31³ (New) An optical disk apparatus according to claim ~~1~~², wherein the arithmetic unit calculates a positive square root of the wobble envelope voltage with respect to the bias voltage assumed as being "1", and provides a value obtained by adding "1" to a result of subtraction of the positive square root from "1" as a calculation result.

REMARKS

Applicant respectfully requests that the Examiner consider the foregoing claims contained in this amendment. If the examiner has any questions or comments regarding this

Preliminary Amendment or the present application, then he or she is invited to telephone the undersigned attorney.

Respectfully submitted,

Dated: 20 Feb '01

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